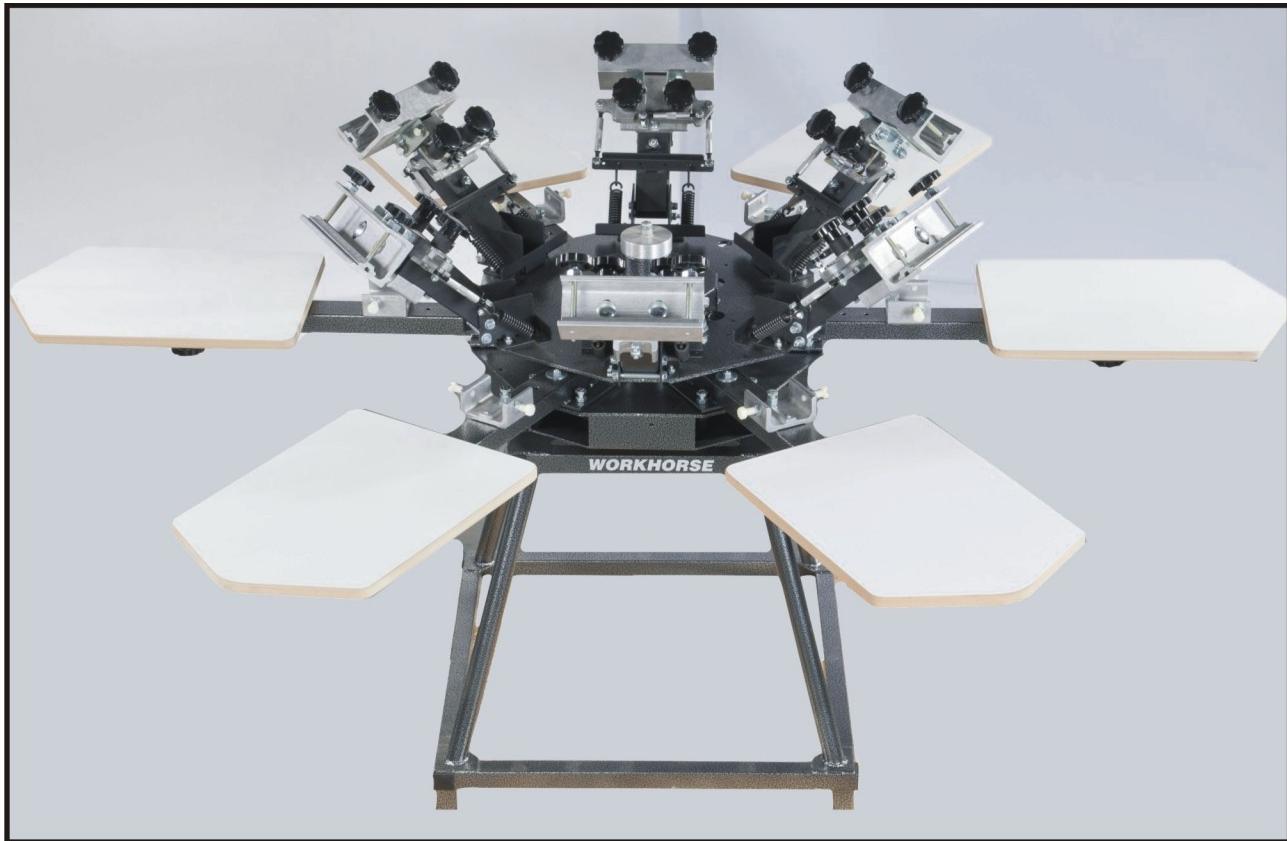


# Odyssey Series Service Manual



**WORKHORSE  
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## **Introduction:**

Odyssey manual printers are value priced industrial machines. While this is our “Entry Level” machine, it’s unlike any other in its price range. The Odyssey line is ideal for start-up operations such as Home Based Businesses, Sporting Good Retailers and Embroidery Companies that want to add a screen printing department. In addition to the rotary load style printers, Odyssey printers are available in economical and specialty table top models as well. With the optional cap, jacket, sign, coozie, sticker, and pocket attachments, this machine is the do it all answer for any small to medium screen printing business.

## **Standard Operations Guide:**

Once the Odyssey press is installed the user can begin to print. Simple adjustments, such as off-contact and screen angle, should be set up to the users desired height. Off contact is the distance between the screen and the sun-straight. Screen angle adjustments allow one end of the screen to be set at a different height from the other end. This is useful when a thicker material is being printed and the off contact is set high. Screen angle also allows you to level the screen with simple adjustments.

Micro-registrations or “micros” are essential in getting a quality print. Micros give a field of movement that allow the user to adjust the image on several axis’s. When setting up a multiple color print, the micros allow for tight registration and proper alignment of all colors in the image. Never use anything but the micro and screen clamp knobs to tighten the assemblies down. Damage to the micros and head assembly can occur if not used properly. Platen alignment is another important adjustment used when printing. The distance of each platen from a common point on the print arms allows for the image to be printed in the same place on every platen.

Using these adjustments will ensure the quality of the print and provide ease in the printing process. Proper and regular maintenance of the machine will ensure the longevity of the parts and that the machine performs at its best.

## **Features/ Specs:**

- Dimensions

98" Diameter

36" Height

- Construction

Sturdy tubular steel construction

Large diameter center shaft

- Features

Fine thread micro registration

Adjustable off contact and screen angles

Easy load, quick change pallets

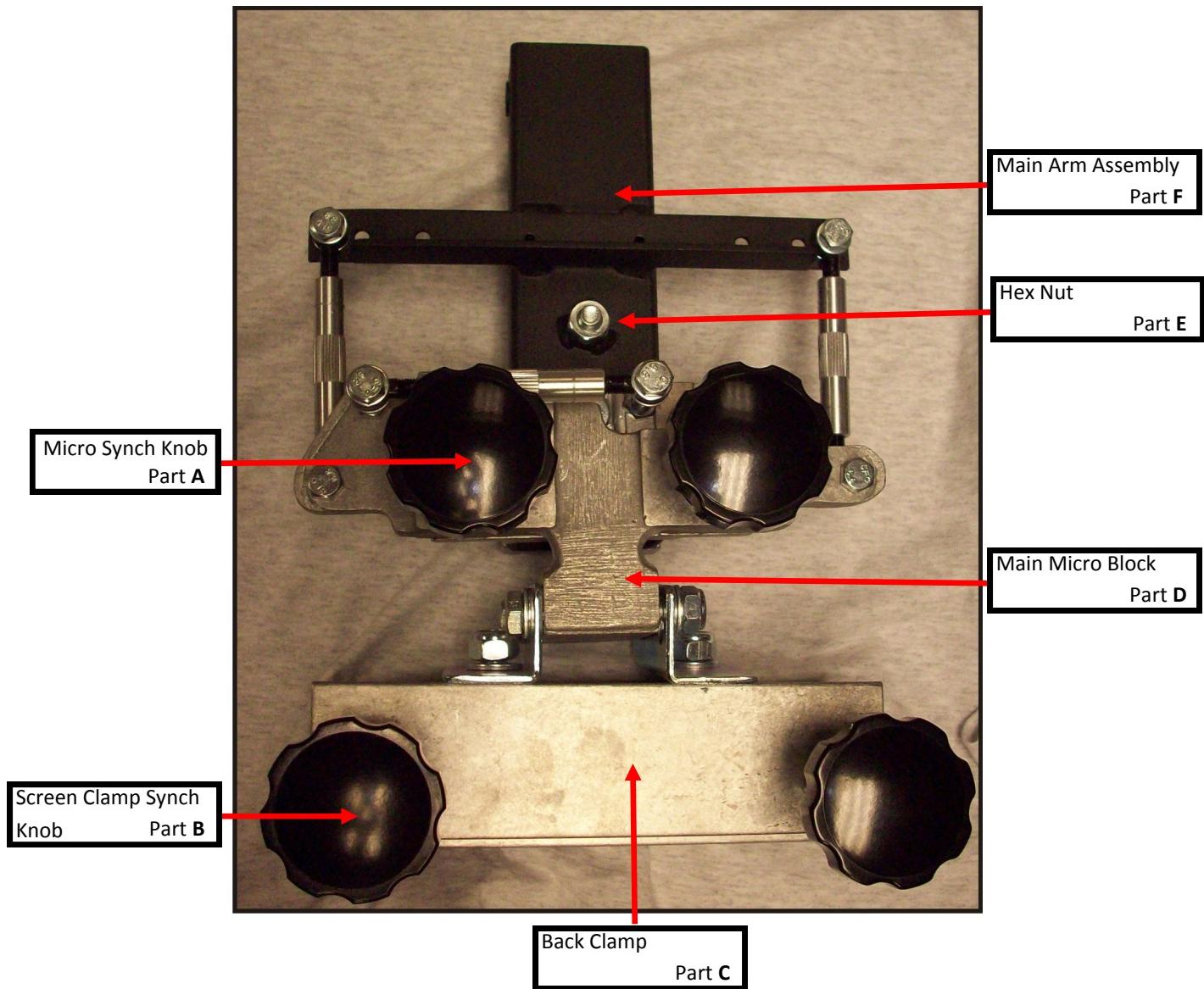
Upgradable four color four station to six color six station

Fully adjustable print heads.

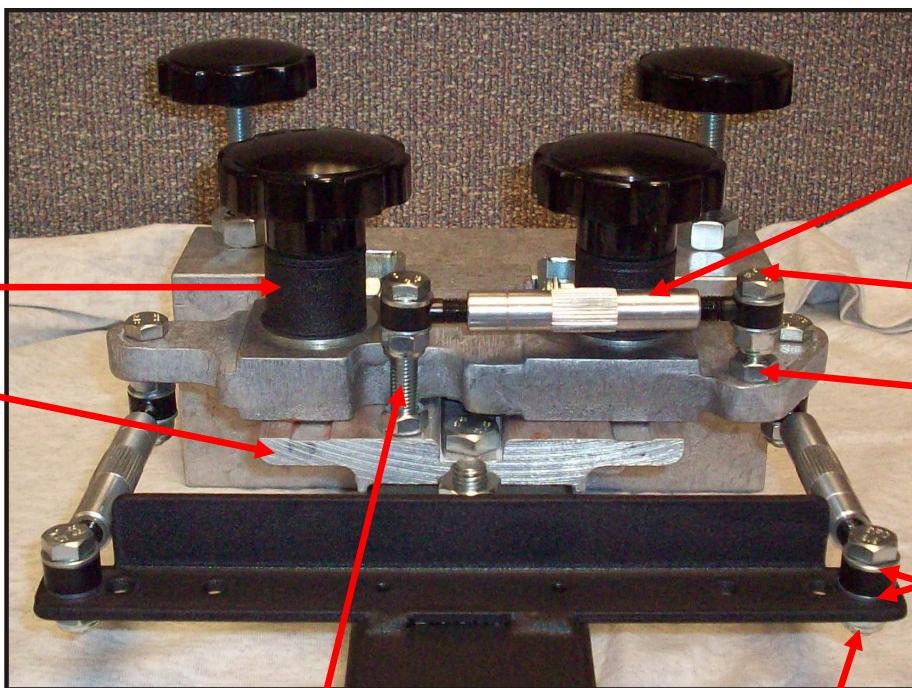
Large diameter registration points

## External Layout

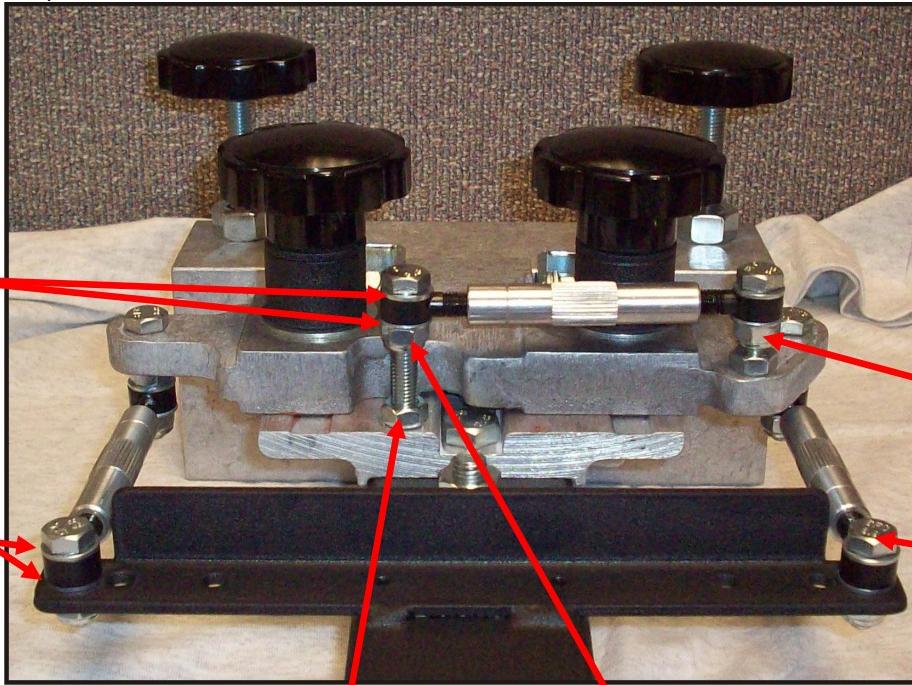
Top View Of Print Head

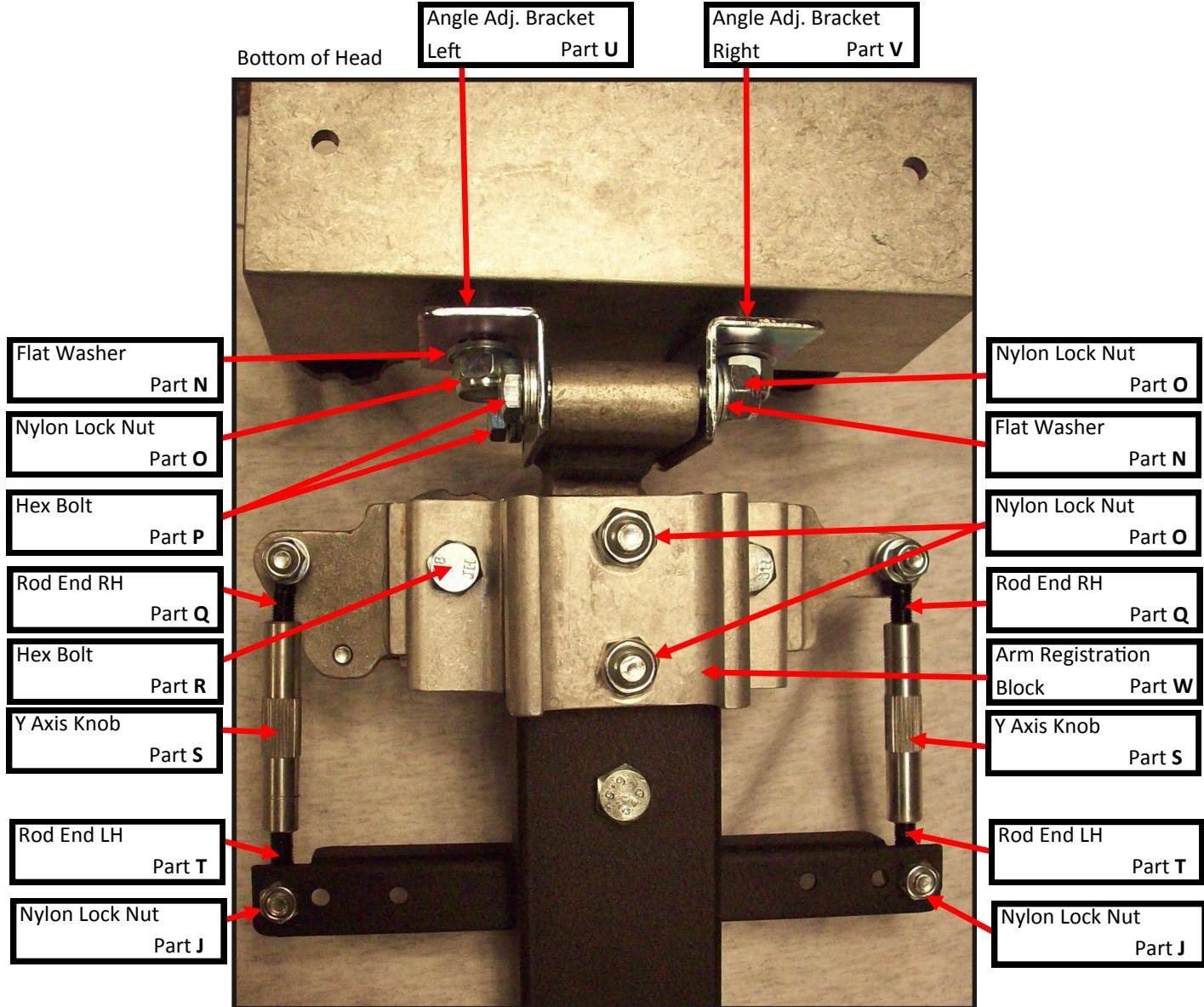


Back of Head

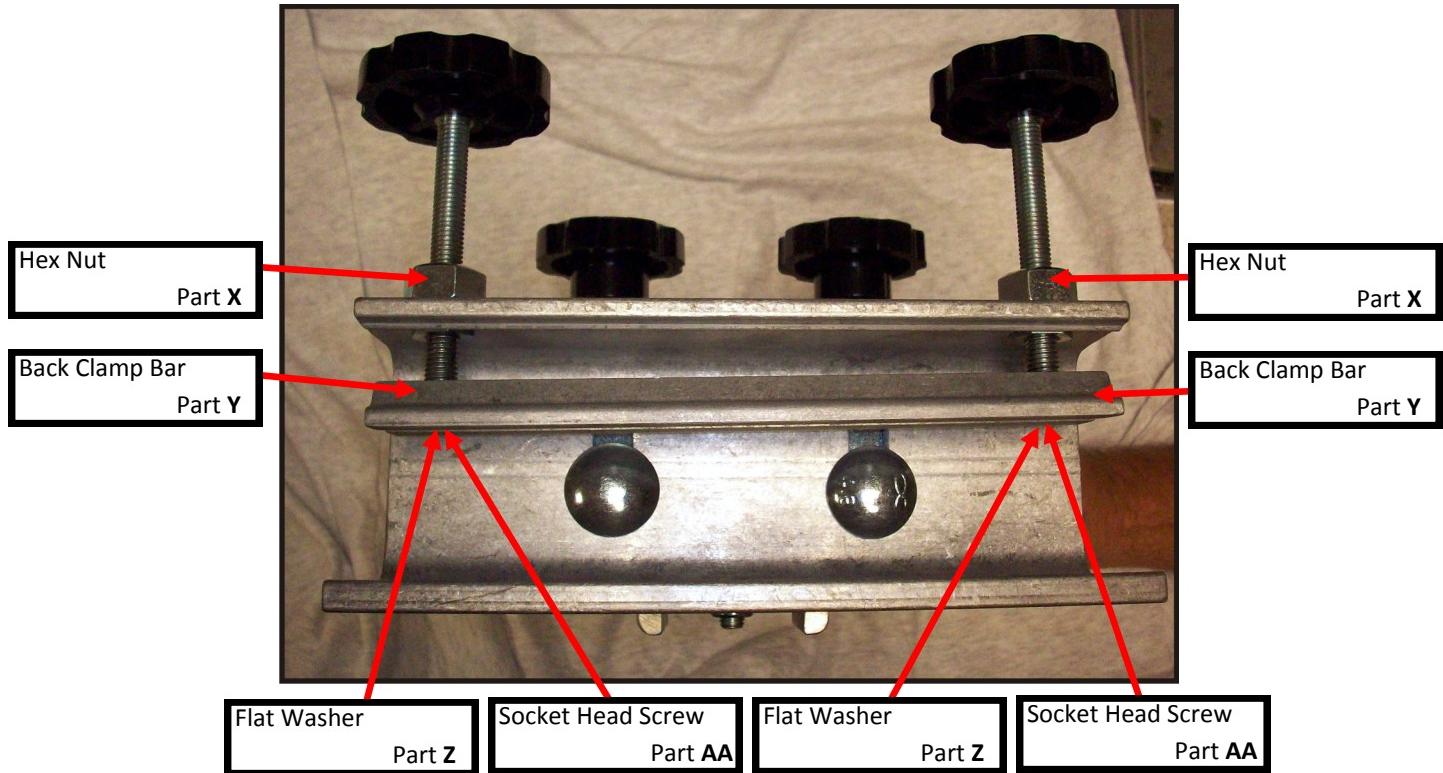


Duplicate View

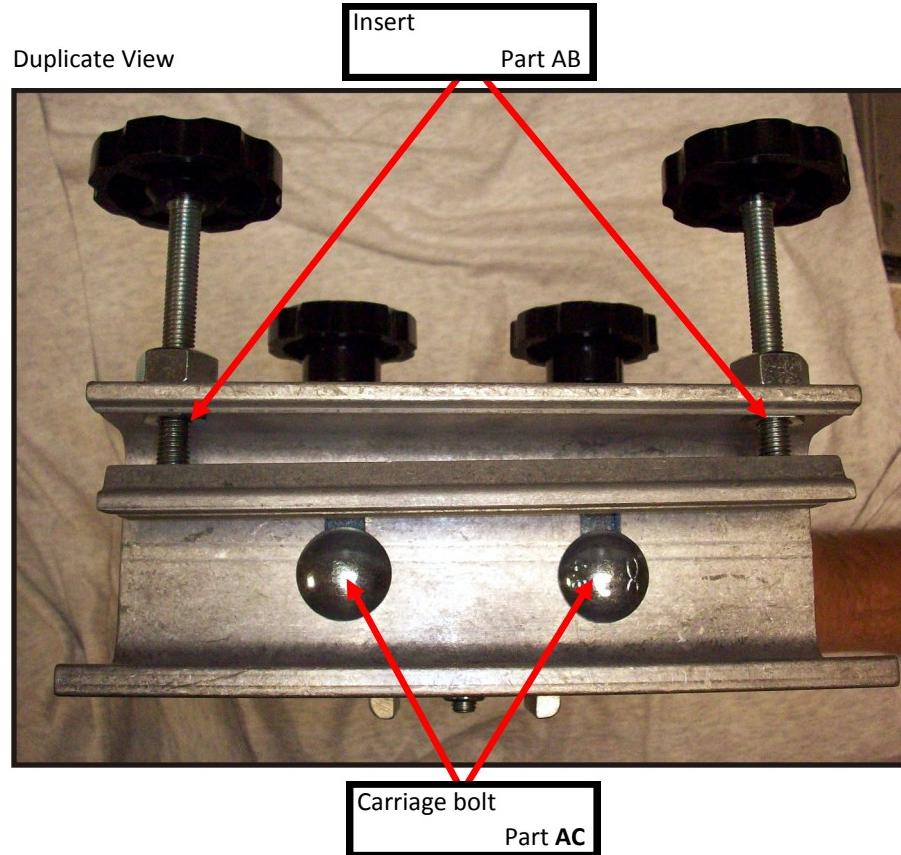


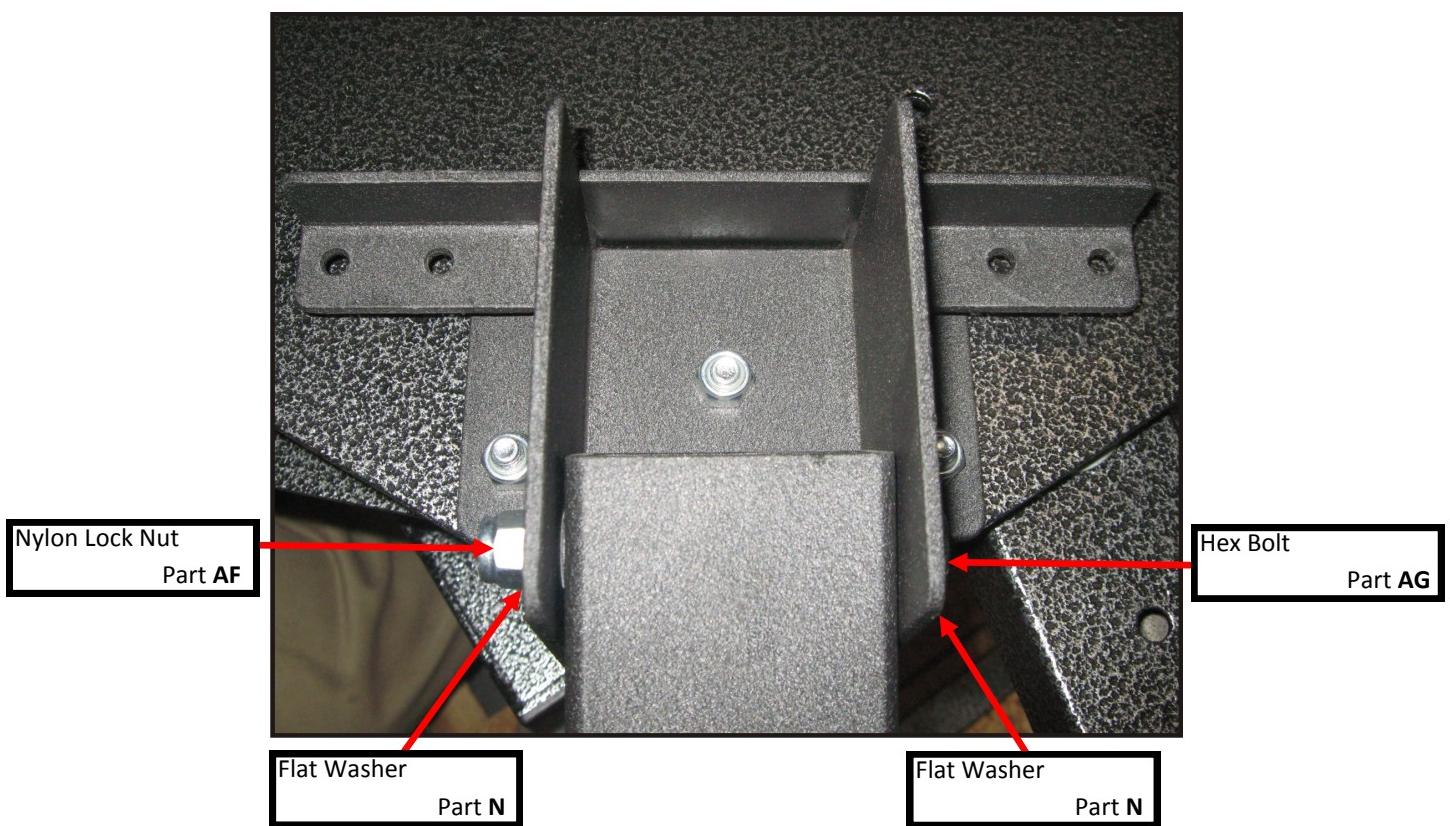
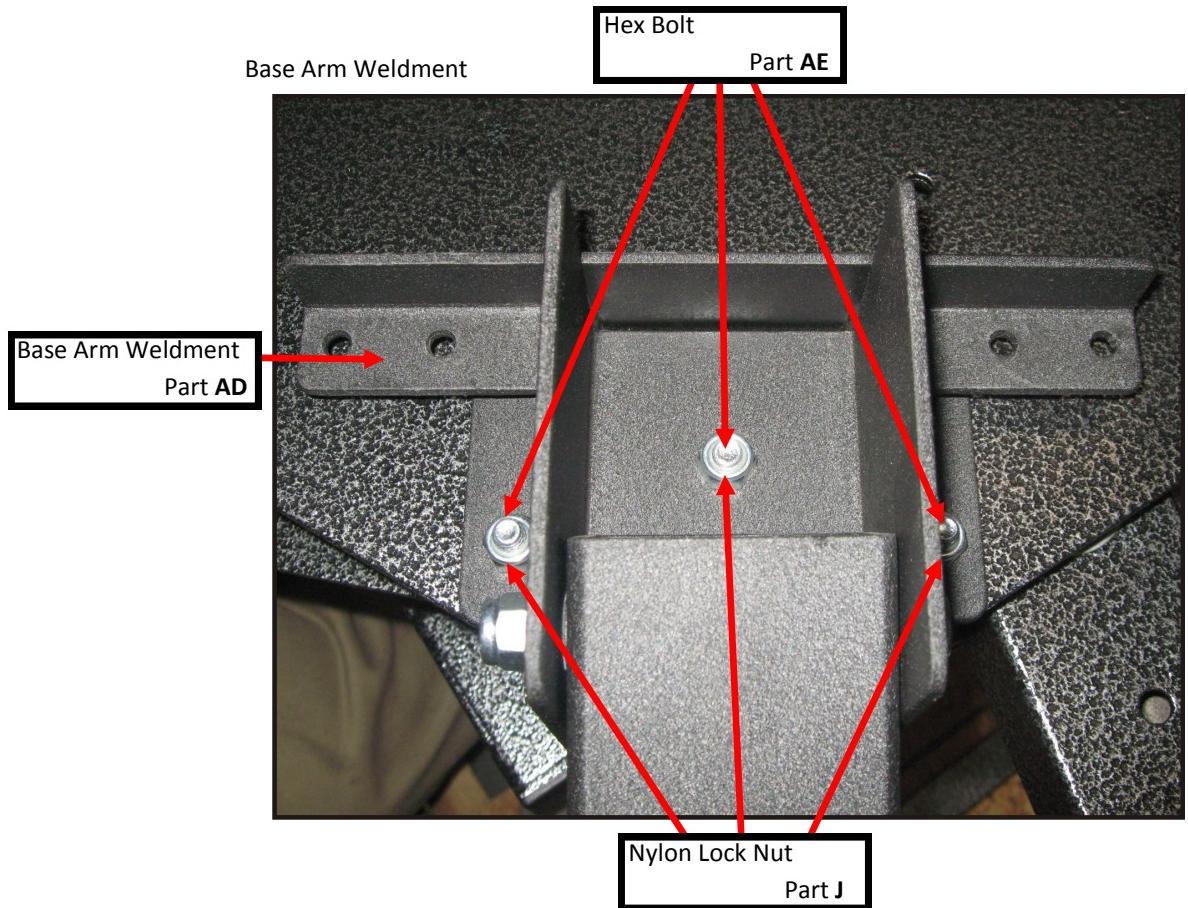


Front View

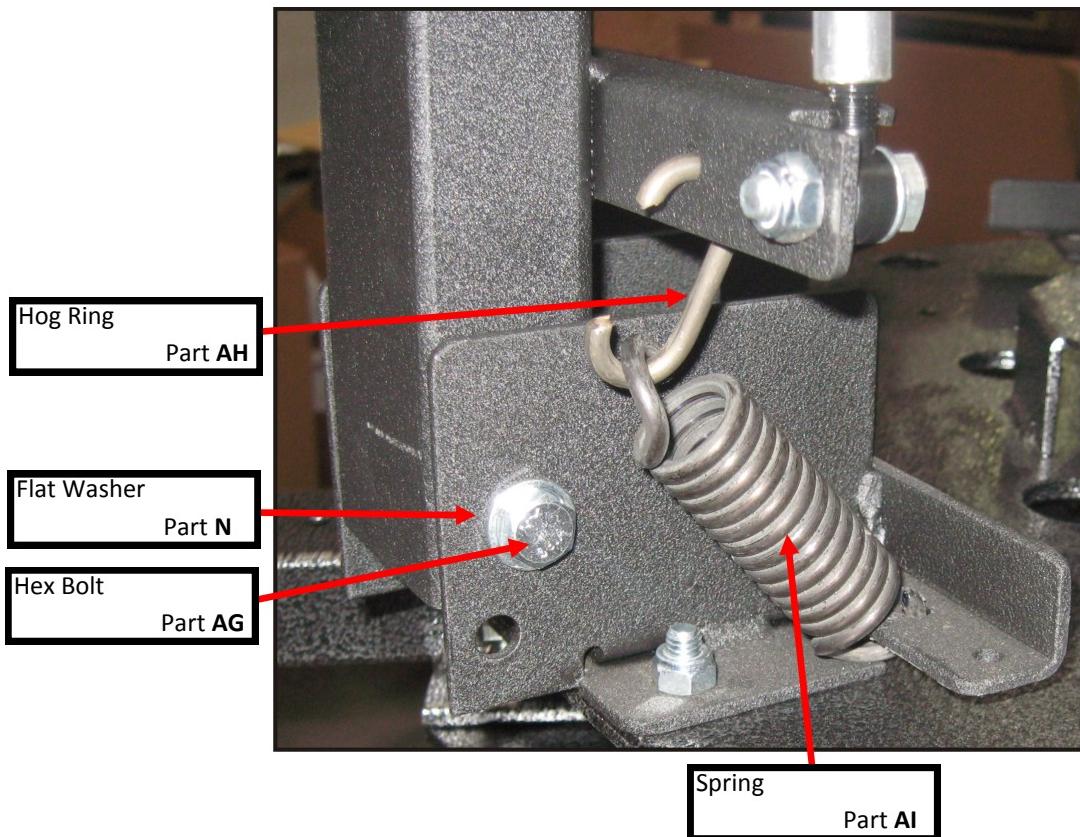


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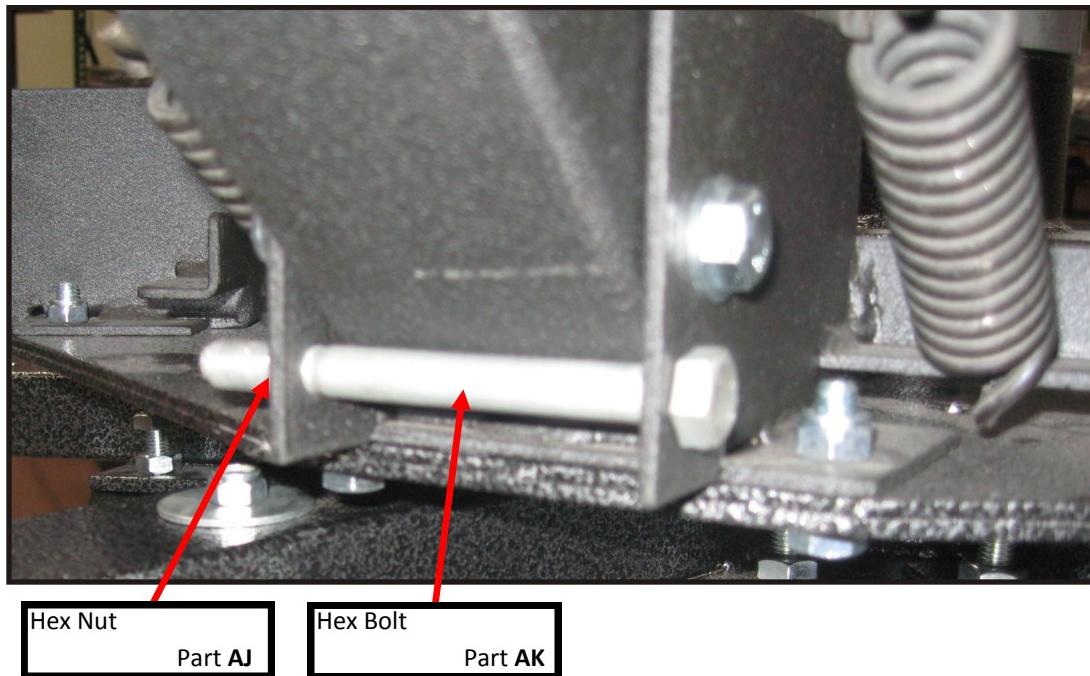




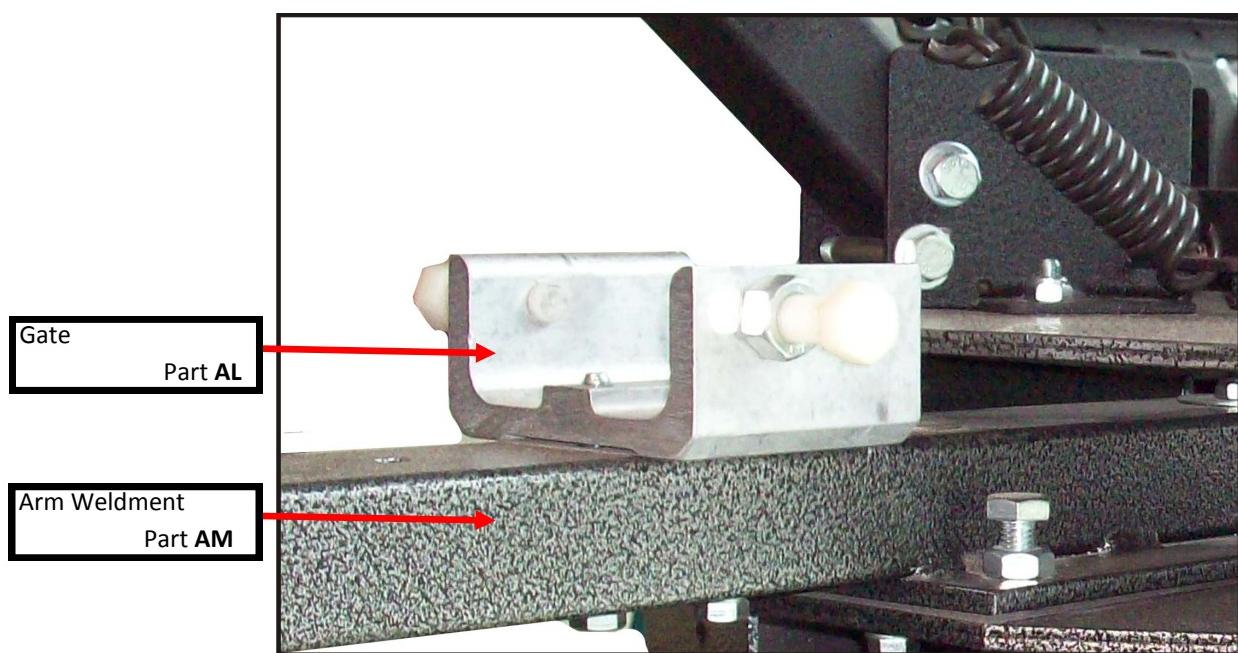
Arm Spring & Hog Ring



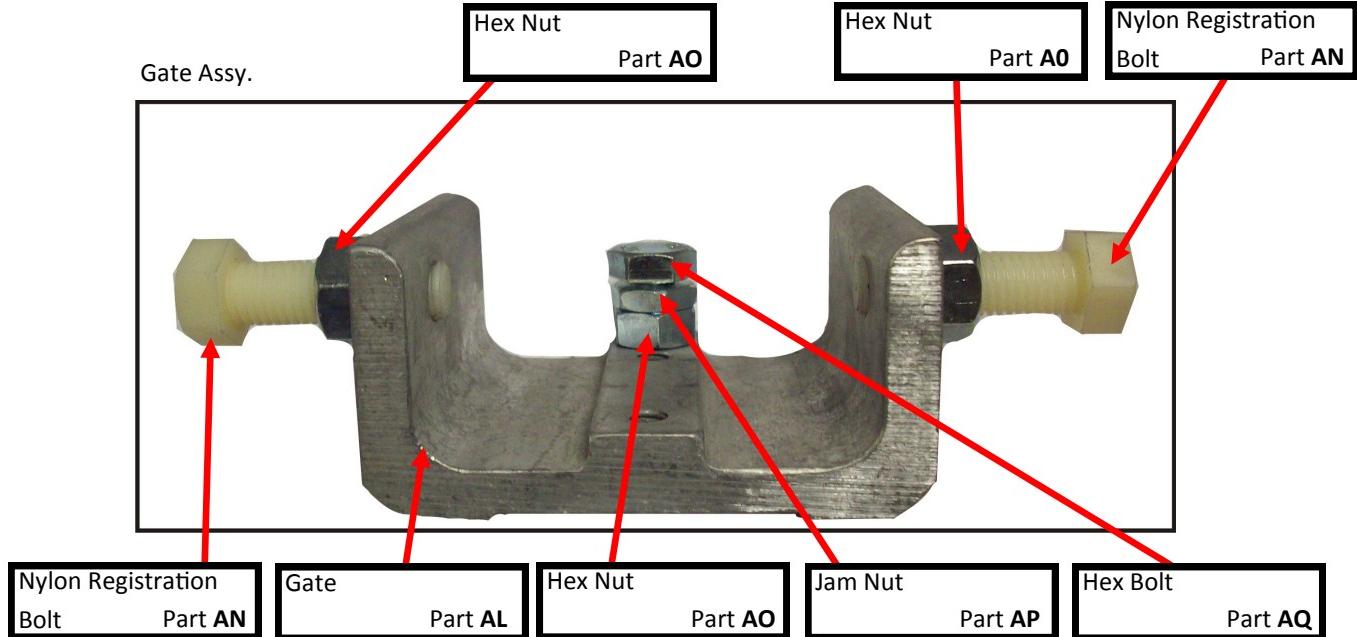
Under Arm View



Gate Assy.

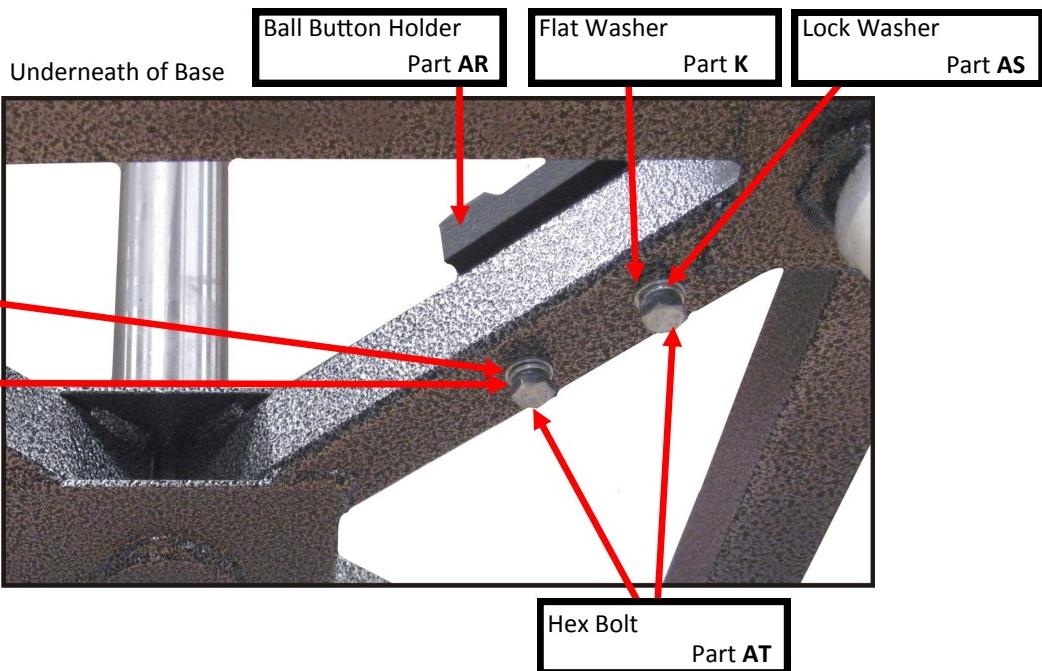
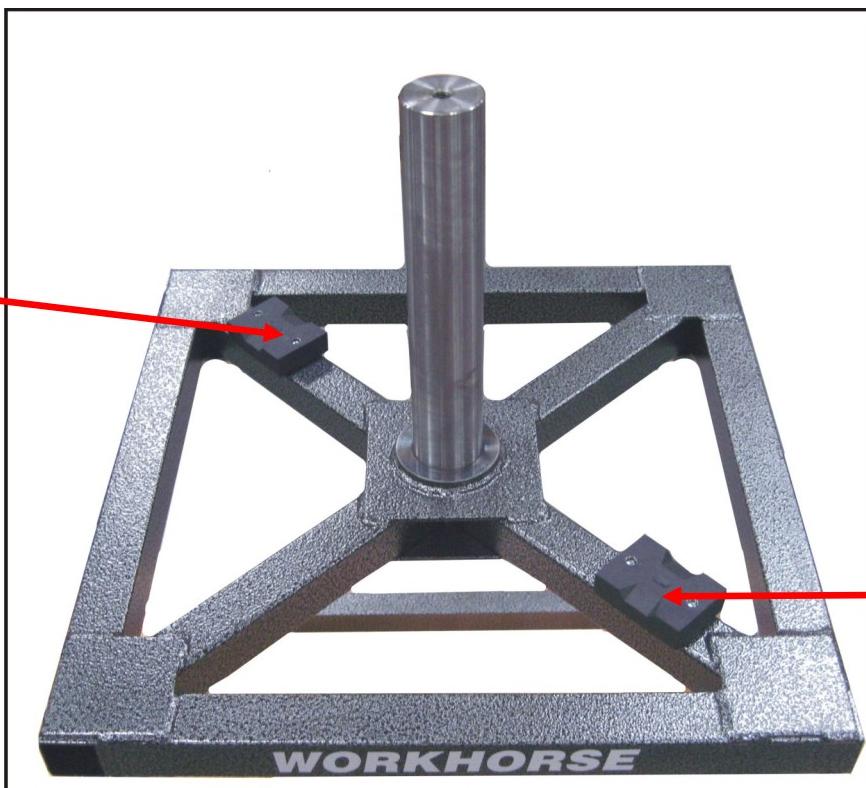


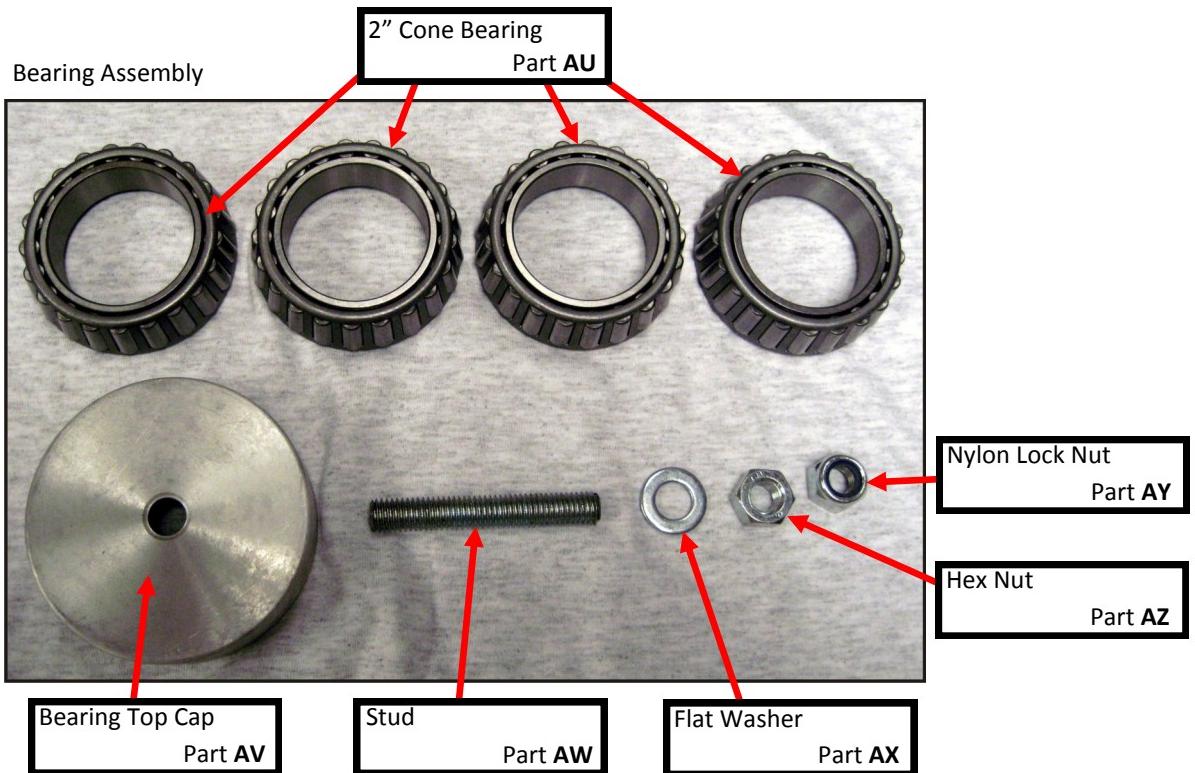
Gate Assy.



## Internal Layout

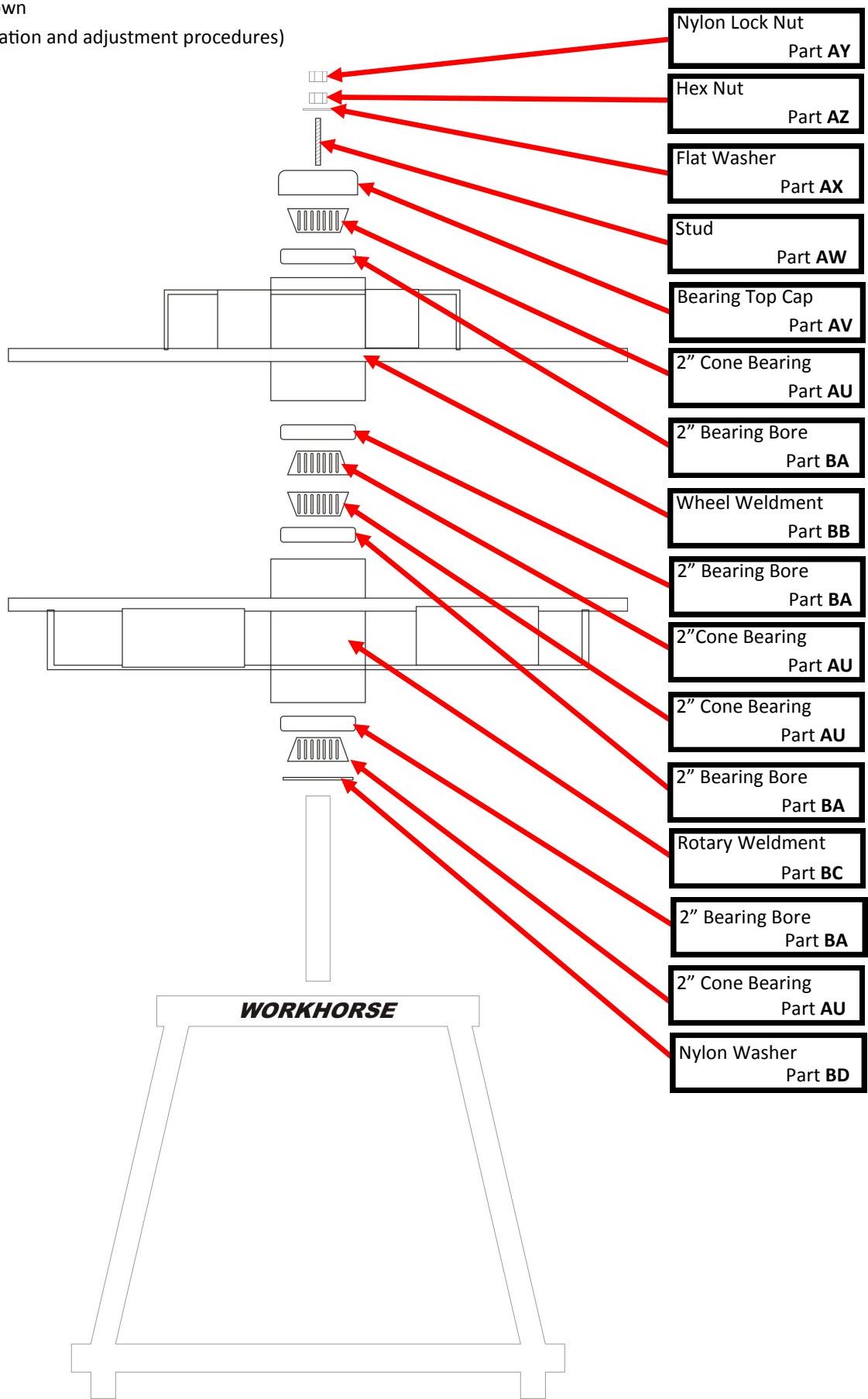
Top of Base



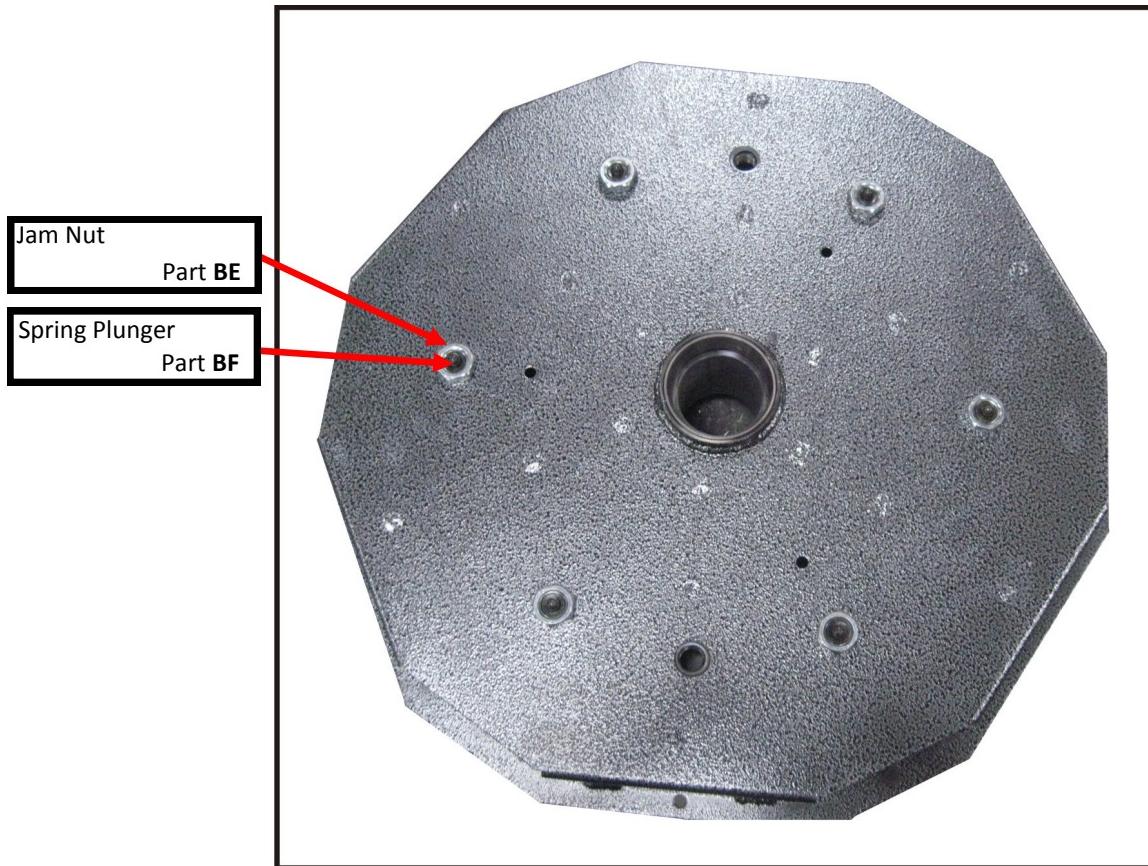


## Bearing Assembly Breakdown

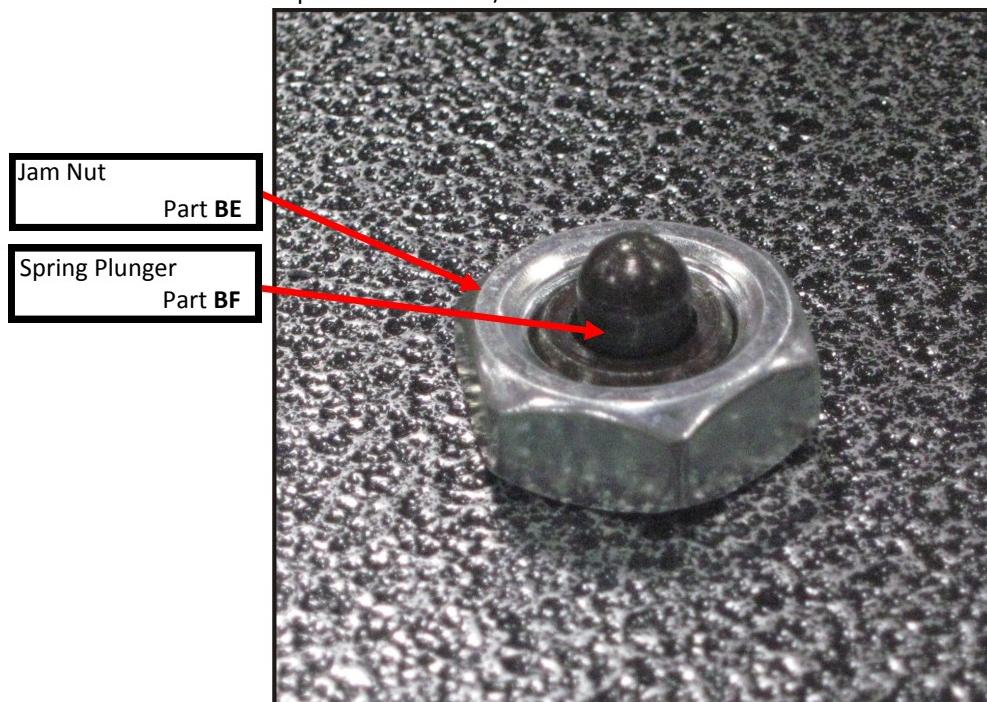
(Refer to FAQ #2 for lubrication and adjustment procedures)



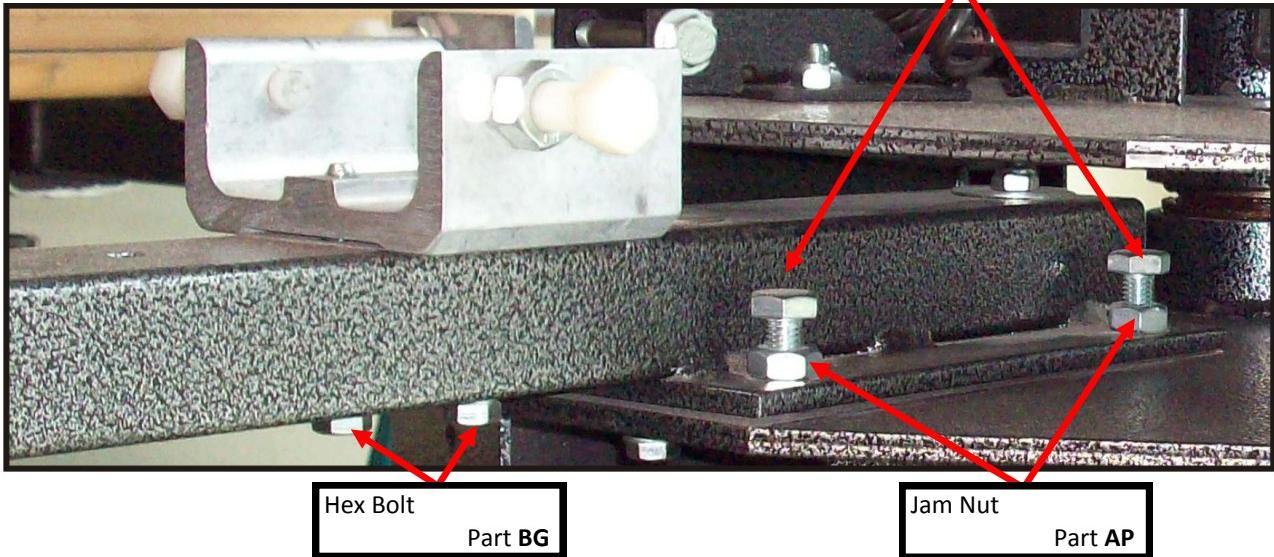
Bottom View of Rotary Weldment



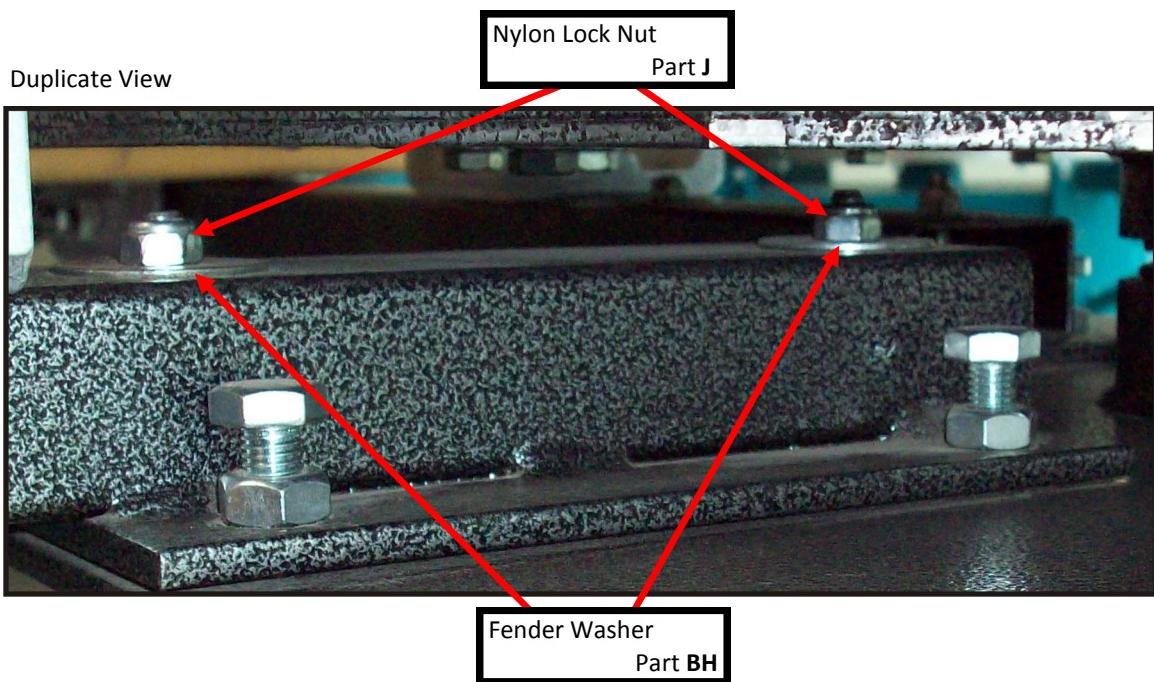
Exploded View of BE/BF



Arm Weldment/ Leveler View



Duplicate View



## FAQ.

### 1. My knobs and micro adjusters don't turn?

Check to see that they are not gummed up with spray adhesive or ink. If they are clean, lubricate them with an oil base solvent or re-grease them with a lithium grease.

### 2. My platens and print heads are stiff and hard to spin or are too loose. How do I adjust them?

Check to see that the resistant nut is not to tight or loose and if the internal tapered bearings needs grease. If grease is needed, use a medium viscosity bearing grease. WE recommended Shell Alvania Grease. Once greased, adjust the jam nut and lock nut until the press rotates 1/2 rotation and stops on its own (Image 1)

Image 1



### 3. How do I adjust my off contact?

The Odyssey comes from the factory leveled and a standard off contact is set.

To adjust the off contact, loosen both of the contact adjustment nuts and bolts by using an 11/16" wrench (Image 2). Then raise or lower the clamp to the desired "off contact" height (Image 3). After the desired height is met, tighten the off contact nuts and bolts (Image 2). The recommended off contact is 1/8" from the platen.

Image 2

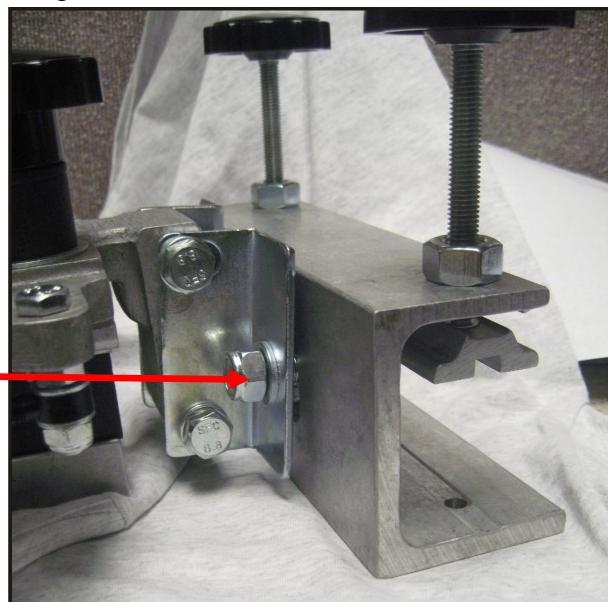
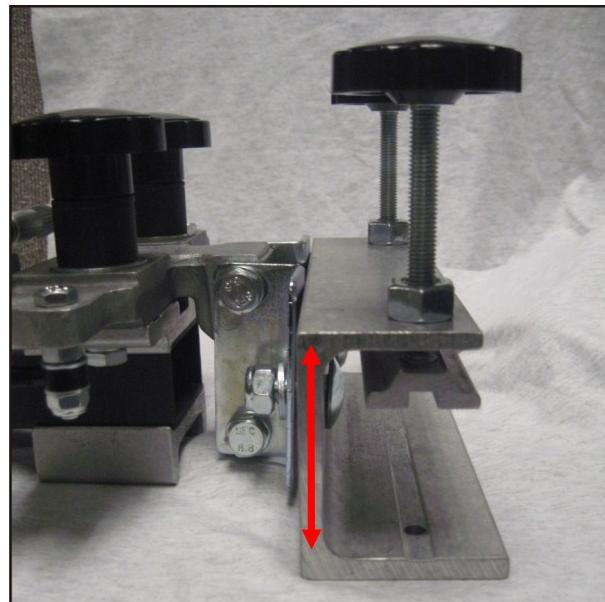
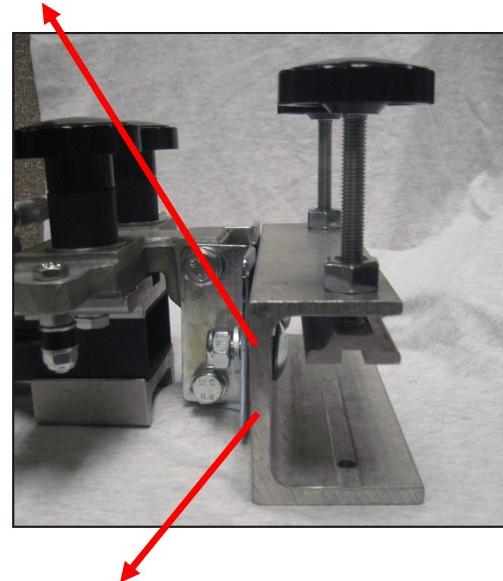
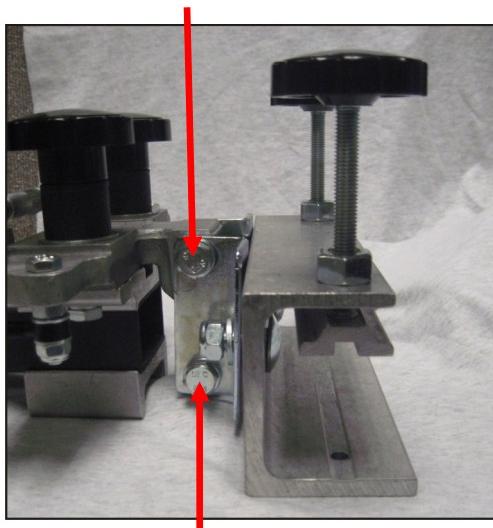


Image 3



#### **4. How do I adjust the screen angle?**

Loosen the two screen angle bolts using an 11/16" wrench, when doing so, make sure the off contact adjustment nuts and bolts are tight (Image 4). Tilt the head up or down until desired angle is reached. The recommended height is 1/8" from platen at any given point to the screen (Image 5). When finished, tighten the screen angle nuts and bolts (Image 4).



#### **5. When should I replace the springs and hog rings?**

It's recommended to replace the springs and hog-rings once a year. See Page 19 for spring and hog ring installation procedures.

#### **6. Why are my hog rings and springs breaking?**

They most commonly break from standard wear and tear. Start by checking the last time they were replaced. It could be the hog rings and springs have not been replaced in a long time. There is a chance that the hog ring and not the spring, or the spring and not the hog ring have been replaced. When replacing one, you should replace the other. Make sure when ordering new hog rings and springs that you order the correct size for your press, and that you order a complete set for the machine.

#### **7. Why is one head not registering, but all the other heads register fine?**

It could be because the measurements are off. If the measurements are off, replace the arm registration blocks with a matched pair. Using precision calipers, measure the arm registration blocks ( Image 6 / 7 ). The arm registration blocks should measure within .004 of an inch of each other.

Image 6

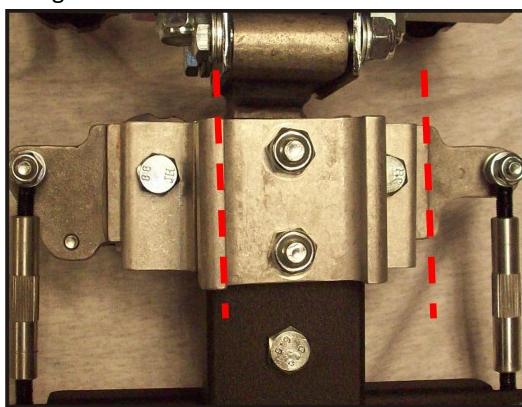
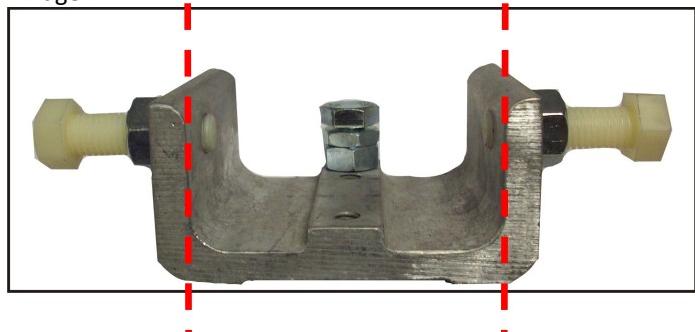


Image 7



## **8. How do I turn my 4 color, 4 station press to a 6 color, 4 station press?**

**Step 1.** Start by removing the print heads. Remove all 3 nylon lock nuts and bolts, save all the hardware as you will be reusing it (Image 8).

**Step 2.** Mount the print heads using the 3 outer holes on the wheel weldment,. Use the same hardware you removed from the print heads in step 1 (Image 8).

**Step 3.** Relocate the registration gate to the first set of holes on the print arm, use the same hardware you removed from the registration gate (Image 9)

**Step 4.** To adjust the off contact loosen both of the contact adjustment nuts and bolts with an 11/16" wrench (Image 2). Then raise or lower the screen clamp to the desired "off contact" height (Image 3). Then tighten the off contact nuts and bolts. Recommended off contact should be set at least 1/8" from the platen.

Image 8

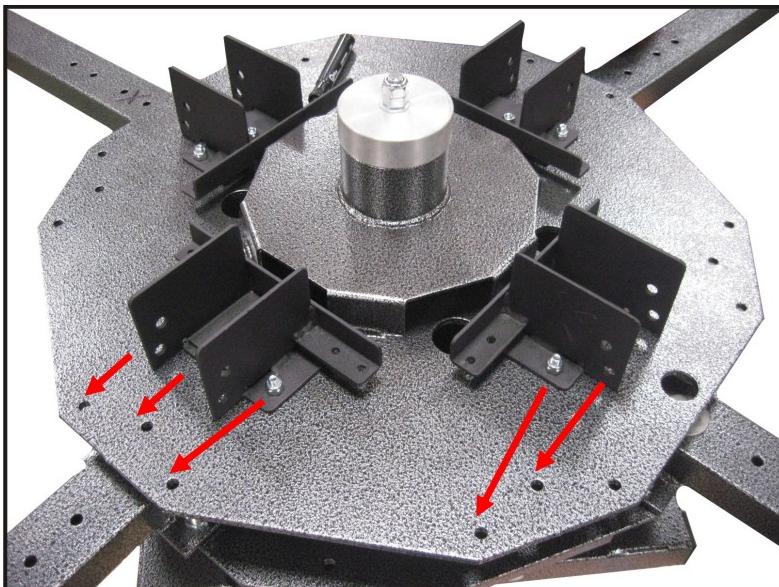
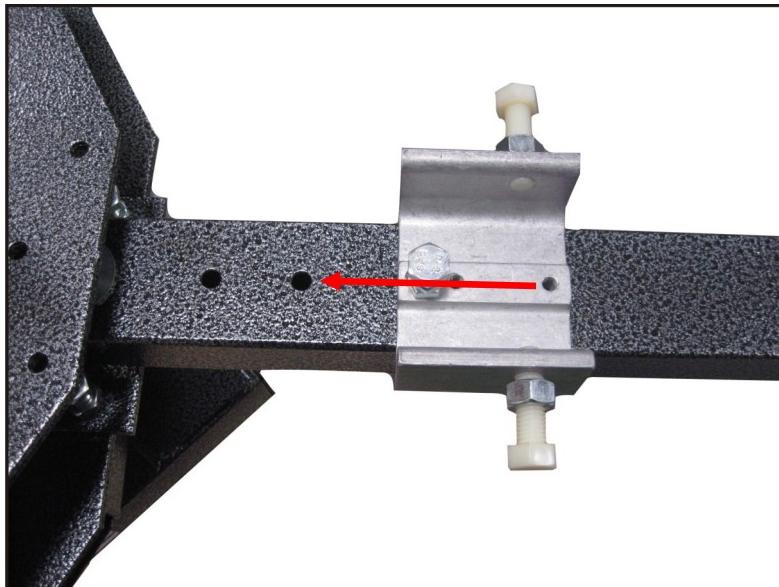


Image 9



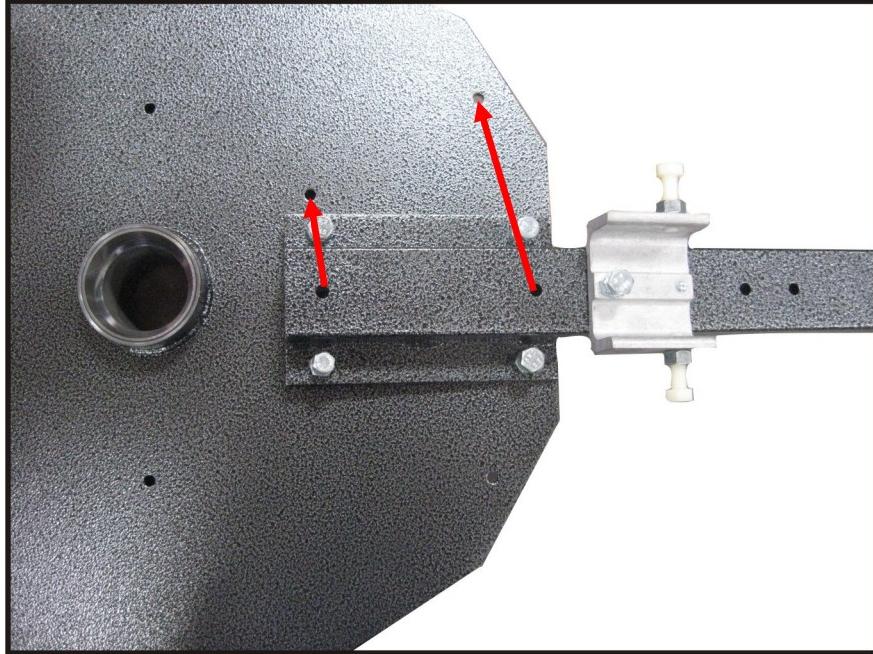
## **9. How do I turn my 4 color, 4 station press to a 6 color, 6 station press?**

**Step 1.** Start by removing the print heads, Remove the 3 nylon lock nuts and bolts, save all the hardware as you will be reusing it (Image 8).

**Step 2.** Mount the print heads, using the 3 outer holes on the wheel weldment. Use the same hardware you removed from the print heads (Image 8).

**Step 3.** Remove the print arms by removing the 2 bolts and nuts in the center of the arm, save all the hardware as you will be reusing it (Image 10).

Image 10



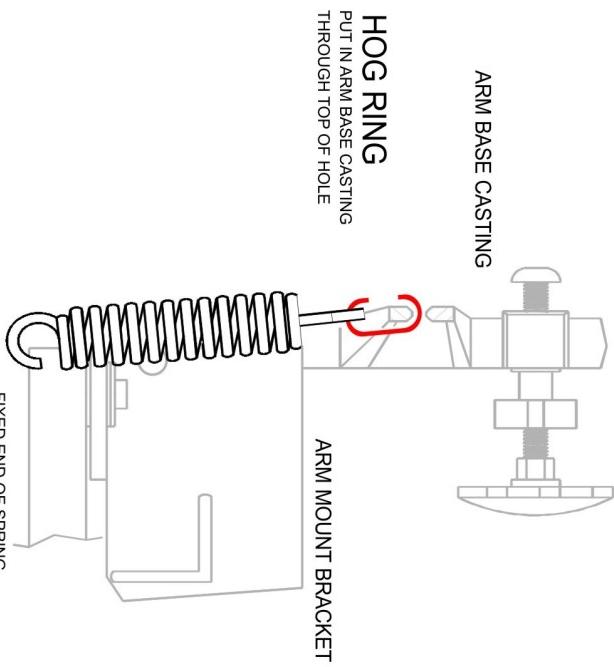
**Step 4.** Mount the pallet arms using the 2 corresponding outer holes, use the same hardware you removed from the print arms (Image 10).

**Step 5.** Relocate the registration gate to the first set of holes on the print arm, use the same hardware originally removed from the registration gate (Image 9).

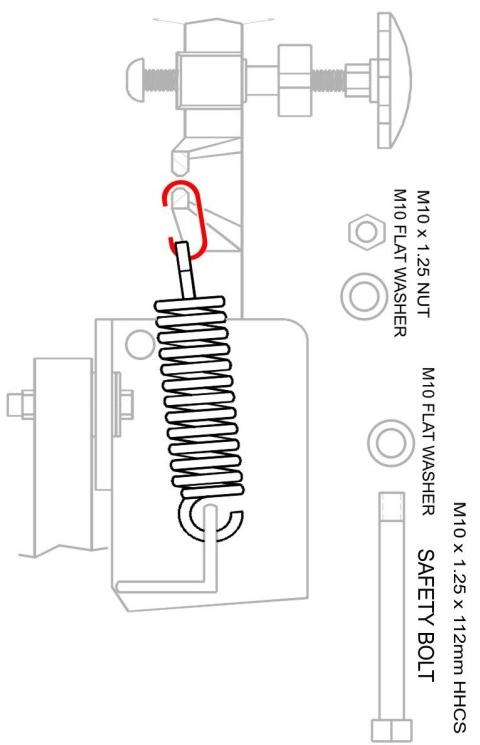
**Step 6.** Adjust the off contact, loosen both off the contact adjustment nuts and bolts with an 11/16" wrench (Image 2). Then raise or lower the screen clamp to the desired "off contact" height (Image 3). After desired height is met, tighten the off contact nuts and bolts. Recommended off contact is 1/8" from the platen.

## WORKHORSE PRODUCTS SPRING INSTALLATION GUIDE

**Image 11**



**Image 12**



■ Hog Ring P/N: 71007  
■ Spring P/N: 71010

1. Insert hog-ring thru the top inside hole in the arm base casting (Image 11).

2. Raise the arm up and back to hook one end of the spring thru the hog ring and the other end of the spring thru the bottom side of the spring bar.

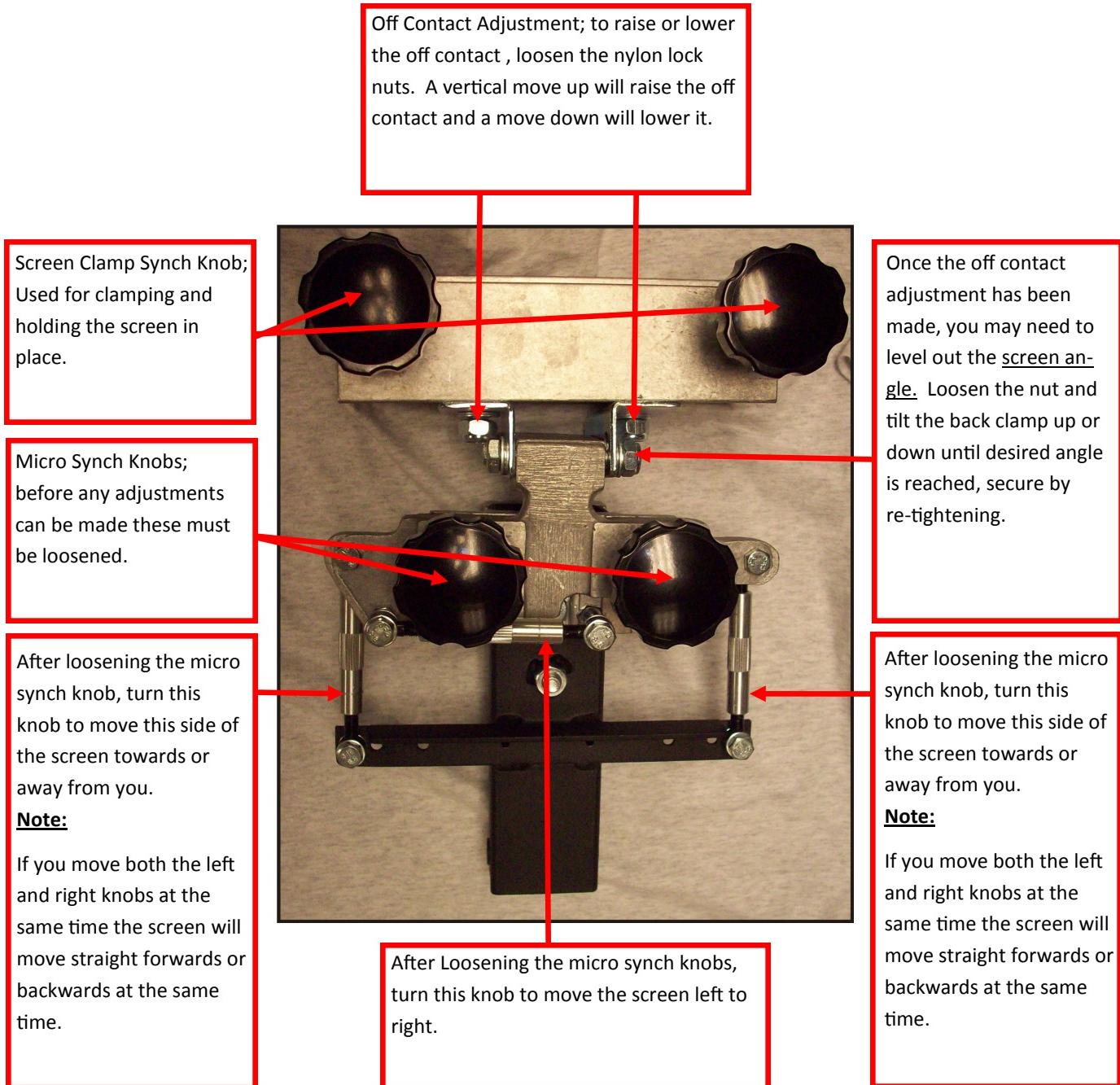
**NOTE:** Make sure the safety bolt, nut and washers are all within an arms reach.

3. With two springs on ( one on each side of the print arm and secured in the holes), pull the arm down into a registration gate on the already mounted print stations.

4. Hold the arm down with one hand and insert the safety bolt thru both sides of the arm mount bracket.
5. Place the washers and nut onto the threaded end of the safety bolt and **\*\*HAND TIGHTEN ONLY\*\***
6. Repeat procedure for any remaining arms.

**NOTE:** To change or replace springs, remove safety bolt and reverse steps 4 and 5.

## Micro Adjustments Explained



## Comprehensive Parts List.

Description		P/N	Description		P/N
A.	Micro Synch Knob	74006	AG.	Hex Bolt (3/8 - 16 x 3 - 1/2)	41-HB-375-60
B.	Screen Clamp Synch Knob	74011	AH.	Hog Ring	71006
C.	Back Screen Clamp	80033	AI.	Spring	71010
D.	Center Casting	81128	AJ.	Hex Nut	42-HEX-375-20
E.	Hex Nut	42-HEX-M10-15	AK.	Hex Bolt (3/8 - 16 x 3 - 3/4)	41-HB-375-75
F.	Micro Arm Assembly	85046	AL.	Gate	80031
G.	Micro Arm Standoff	85147	AM.	Print Station Weldment	85142
H.	Lower Registration Block	81116	AN.	Nylon Registration Bolt	41-NYL-M12-10
I.	Hex Bolt (1.25 x 40mm)	41-HTB-M8-10	AO.	Hex Nut	42-HEX-M10-15
J.	Nylon Lock Nut (M8 x 1.25)	42-NYL-M8-10	AP.	Jam Nut	42-JAM-M10-10
K.	Flat Washer	43-FLT-M8-10	AQ.	Hex Bolt	41-HB-M10-20
L.	Hex Nut (M8 x 1.25)	42-HEX-M8-10	AR.	Detent Block	81315
M.	Hex Bolt (1.25 x 25mm)	41-HTB-M8-10	AS.	Lock Washer	43-LOC-M8-10
N.	Flat Washer	43-FLT-M10-10	AT.	Hex Bolt (1.25 x 60mm)	41-HTB-M8-30
O.	Nylon Lock Nut	42-NYL-M10-10	AU.	2" Cone Bearing	75002
P.	Hex Bolt (1.5 x 70mm)	41-HB-M10-30	AV.	Bearing Top Cap	20013
Q.	Rod End (Right Hand Thread)	75425	AW.	Stud	81002
R.	Hex Bolt (1.25 x 70mm)	41-HB-M8-30	AX.	Flat Washer	43-FLT-M12-10
S.	Y Axis Knob (5/16 X 24)	60267	AY.	Nylon Lock Nut	42-NYL-M12-10
T.	Rod End (Left Hand Thread)	75424	AZ.	Hex Nut	42-HEX-M12-10
U.	Angle Adj. Bracket (Left)	60215	BA.	2" Bearing Bore Cup	75001
V.	Angle Adj. Bracket (Right)	60214	BB.	Wheel Weldment	85138
W.	Arm Registration Block	81302	BC.	Rotary Weldment	85170
X.	Hex Nut (9/16 x 12)	42-HEX-5625-10	BD.	Nylon Washer	60169
Y.	Back Clamp Bar	81025	BE.	Jam Nut	42-JAM-750-10
Z.	Flat Washer	43-FLT-M4-10	BF.	Spring Plunger	71015
AA.	Socket Head Screw (.7 x 10mm)	41-SHCS-M4-15	BG.	Hex Bolt	41-HTB-M8-30
AB.	Insert (M10 Int. 9/16 )	60079-1	BH.	Fender Washer	43-FND-375-30
AC.	Carriage Bolt (1.75 x 30mm)	41-CB-M12-20			
AD.	Base Arm Weldment	85143			
AE.	Hex Bolt (1.25 x 20mm)	41-HB-M8-10			
AF.	Nylon Lock Nut	42-NYL-375-10			